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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,985	02/27/2002	Jeremy Jones	99069	6845

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EXAMINER

MCDONALD, SHANTESE L

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 06/04/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/083,985

Applicant(s)
Jones et al.

Examiner
McDonald, Shantese

Art Unit
3723



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 27, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-11, 18, 21-28, and 30-37 is/are rejected.
- 7) ☒ Claim(s) 7, 12-17, 19, 20, and 29 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2,3 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5,6 and 22-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear in claims 5, and 6, how the structure is compressed by about 10-50% of its thickness prior to compression.

Claim 22 does not further limit claim 1.

Claims 22-29 are apparatus claim depending from a method claim.

Claims 30-37 are method claims depending from apparatus claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6,8-11, 18 and 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. in view of Budinger et al.

Roberts et al. teaches providing a polymer structure, (col. 3, line 54), which comprises a thermoplastic, (col. 3, line 37), compressing at least a region of the structure to provide a translucent region, (col. 4, line 61), forming a polishing pad comprising the polymer structure, whereby a polishing pad is produced comprising the translucent region., (col. 2, line 53- col. 4, line 61). Roberts et al. also teaches the polishing pad further comprises an opaque region, (col. 3, line 11-12), and mating the translucent region to a second polymer structure. Roberts et al. teaches all the limitations of the claims except for the polymer structure being porous, and being polyurethane, and the polymer structure being heated to a temperature about 10-50 C, of its melting temperature, the structure being compressed by about 10-50% of its thickness before compression, and the translucent region is translucent to light having a wavelength of about 190 to 3500nm. Budinger et al. teaches a porous polyurethane polymer, (abstract, lines 2-5). It would have been obvious to one having ordinary skill in the art at the time the invention was made, to provide the a porous polyurethane, to the invention of Roberts et al., as taught by Budinger et al., in order to enhance the polishing capabilities.

It would have been further obvious to provide the invention of Roberts et al. with the polymer structure being heated to a temperature about 10-50 C, of its melting temperature, the structure being compressed by about 10-50% of its thickness before compression, and the translucent

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region is translucent to light having a wavelength of about 190 to 3500nm, since it has been held that, where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

5. Claims 30-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. as modified by Budinger et al. as applied to claims 1-6, 8-11, 18 and 21-27 above, and further in view of Lustig et al.

Roberts as modified by Budinger et al. teaches all the limitations of the claims except for contacting a semiconductor device with a polishing pad and moving them relative to each other and passing a laser light through the translucent region of the polishing pad. Lustig teaches contacting a semiconductor device, 52, with a polishing pad, and moving them relative to each other, and passing a laser light, 77, through the translucent region of the polishing pad. It would have been obvious to one having ordinary skill in the art at the time the invention was made, to utilize the polishing pad of Roberts, as modified by Budinger, in the method, as taught by Lustig et al., in order to enhance the polishing capabilities.

Allowable Subject Matter

6. Claims 7,12-17,19,20, 28 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Newell was cited to show another example of a polishing pad.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shantese McDonald whose telephone number is (703) 308-8722.



Joseph J. Hail, III
Supervisory Patent Examiner
Technology Center 3700

S.L.M.

June 1, 2003